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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/849,197	05/20/2004	Takru Watanabe	0171-1098PUS1	7290

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EXAMINER

CHU, JOHN S Y

ART UNIT	PAPER NUMBER
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1752

DATE MAILED: 03/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/849,197

Applicant(s)

WATANABE ET AL.

Examiner

John S. Chu

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 6-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

This Office action is in response to the amendment filed December 20, 2005.

1. The rejection under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of copending Application No. 10/679,367, also PGPub. 205/0095527 A1 is **withdrawn** in view of the arguments by applicant.
2. The rejection under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention is withdrawn in view of the arguments by applicant.
3. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by YOKOYAMA et al 2005/0095527 A1 is **withdrawn** in view of the amendment canceling claim 1 and now reciting claim 2 as the independent claim.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 1, 2 and 16 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure, which is not enabling. The components such as a resin, a photoacid generator typically in a resist composition as desired in the preamble of claim 2 are not recited and are critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). The claim merely is a compound as claimed and similar in scope to the recited withdrawn claim 8.

Correction is necessary to enable the claim.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

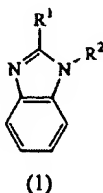
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1-4 and 16 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by KHOJASTEH et al (6,770,419) or LOCCUFIER et al (6,361,920).

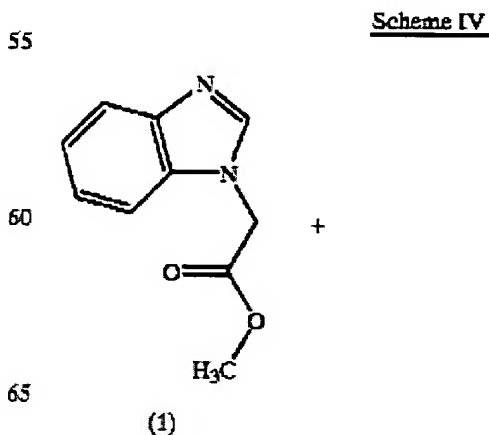
1. (Original) A resist composition comprising at least one basic compound having a benzimidazole skeleton and a polar functional group, represented by the general formula (1):



wherein R¹ is a hydrogen atom, a straight, branched or cyclic alkyl group of 1 to 10 carbon atoms, an aryl group of 6 to 10 carbon atoms, or an aralkyl group of 7 to 10 carbon atoms; and R² is a polar functional group-bearing straight, branched or cyclic alkyl group of 1 to 20 carbon atoms wherein said alkyl group contains as the polar functional group at least one group selected from among ester, acetal and cyano groups, and optionally at least one group selected from among hydroxyl, carbonyl, ether, sulfide and carbonate groups.

KHOJASTEH et al discloses a composition for bilayer resist formulation wherein Examples 3-5, found in column 8, line 52 – column 9, line 50 anticipate the claimed resist composition/compound of formula (1) and formula (3) as recited.

LOCCUFIER et al anticipates the claimed invention at column 10, lines 50-65 which is exemplified hereafter:



Because the claim can be interpreted to be a compound alone due to the lack of essential features of a resist composition, this reference is seen to anticipate the recited claims above.

Claim Rejections - 35 USC § 103

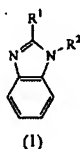
12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1-5, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over YOKOYAMA et al 2005/0095527 A1.

The claimed invention is drawn to the following:

1. (original) A resist composition comprising at least one basic compound having a benzimidazole skeleton and a polar functional group, represented by the general formula (1):



wherein R¹ is a hydrogen atom, a straight, branched or cyclic alkyl group of 1 to 10 carbon atoms, an aryl group of 6 to 10 carbon atoms, or an aralkyl group of 7 to 10 carbon atoms; and R² is a polar functional group-bearing straight, branched or cyclic alkyl group of 1 to 20 carbon atoms wherein said alkyl group contains as the polar functional group at least one group selected from among ester, acetal and cyano groups, and optionally at least one group selected from among hydroxyl, carbonyl, ether, sulfide and carbonate groups.

YOKOYAMA et al discloses and suggests the claimed compound of formula (1) on page 1, subparagraph [0017] when R⁶ and R⁷ are defined as bonded to form a ring. Here the skilled artisan is clearly motivated to attach a ring to the structure in YOKAYAMA et al as suggested, such as an aromatic ring. Also see claim 1 wherein formula (1) again suggests the use of having a ring structure between R⁶ and R⁷.

It would have been *prima facie* obvious to one of ordinary skill in the art of basic compounds in photoresist compositions to added a ring the compound of formula (1) in YOKOYAMA et al and reasonably expect same or similar results as disclosed in the reference such as high storability and excellent resolution.

The arguments by applicants have been carefully considered, however the skilled artisan would be motivated to use an aromatic ring structure in place of R⁶ and R⁷ of YOKOYAMA et al still reasonably expect same or similar results as disclosed in YOKOYAMA et al. This can be seen in the newly cited references above where aromatic rings attached to the heterocyclic portion of the imidazole compound. The rejection is repeated.

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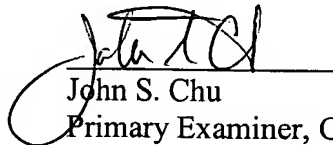
14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. WATANABE et al (2005/0095533 A1) is cited of interest wherein a nitrogen-containing compound is claimed however the side groups are different. Formula (1) in WATANABE et al is different from formulae (4) and (6) in the current application in claim 2.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Chu whose telephone number is (571) 272-1329. The examiner can normally be reached on Monday - Friday from 9:30 am to 6:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Cynthia Kelly, can be reached on (571) 272-1526

The fax phone number for the USPTO is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PMR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John S. Chu
Primary Examiner, Group 1700

J.Chu
March 4, 2006